UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,394	06/25/2003	Frank Westendorf	7781.0084-00	4798

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EXAMINER
MITCHELL, JASON D

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/606,394	WESTENDORF ET AL.
	Examiner	Art Unit	
	Jason Mitchell	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 May 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>25 May 2007</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-45 are pending in this application.

Response to Arguments

2.   Applicants assert that Figs. 3-5 "illustrate a computer, components of a

computer, and a computer system <u>that incorporate the Applicants' claimed invention</u>".

Figures 3-5 show computer systems and their components, which *may* be used

to execute Applicant's system (see pars. [011-13] of the specification). However, the

figures do not include structures that directly map to any aspect of Applicant's claimed

system. Thus, they only show "a general computer, general components of a computer,

and a general computer system" which Applicant acknowledges were know in the prior

art (see the last partial par. of pg. 13). Accordingly the objection to Figures 3-5 is

maintained.

Drawings

3.   **Figures 3-5 should be designated by a legend such as --Prior Art-- because**

only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the Examiner, the

Applicant will be notified and informed of any required corrective action in the next

Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 1-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

"The Java Virtual Machine Specification" by Lindholm et al. (Lindholm) in view of

US 2002/0049603 to Mehra et al. (Mehra).

6.   **Regarding Claim 1, 16, 31:** Lindholm discloses:

defining one or more classes of objects, the classes having one or more methods

for performing operations on the objects (pg. 30, 2.13 Interfaces "An interface is a

reference type whose members are constants and abstract methods.");

creating one or more objects of the one or more classes, each object having an

identifier within its class (pg. 30, 2.13 Interfaces "classes can implement [an interface]

by providing implementations for its abstract methods."; pg. 9, 2.4.5 Reference Types,

Objects, and Reference Values "There are three kinds of reference types: ... the

interface types (§2.13) ... An object is a dynamically created class instance ... The

reference values ... are pointers to these objects");

creating a tool having at least one function for providing an executable solution to

the one or more methods of the one or more classes, whereby the at least one function

is assigned to one or more methods of the one or more classes (pg. 30, 2.13 Interfaces

"A class may be declared to directly implement one or more interfaces, meaning that

any instance of the class implements all the abstract methods specified by that

interface."); and

assigning the tool to one of the one or more objects of the one or more classes

by using the identifier of the object (pg. 30, 2.13 Interfaces "It is not sufficient that the

class happens to implement all the abstract methods of the interface; the class ... must

actually be declared to implement the interface, or else the class is not considered to

implement the interface."; pg. 258, invokeinterface "Stack ..., objectref, parg1, [arg2

...]]").

7.   Lindholm does not disclose a technical attribute associated with a first executable

solution or a business attribute associated with a second executable solution wherein

the business attribute is modifiable by a non-programmer and the technical attribute is

not.

8.   Mehra teaches metadata indicating that an attribute is, or is not modifiable by a

non-programmer (see the table in col. 2 of pg. 9, "Flags ... 7th bit => Customization bit.

... can be customized by end user").

9.   It would have been obvious to one of ordinary skill in the art at the time the
invention was made to modify Lindholm to include metadata defining technical and
business attributes as taught by Mehra (par. [0229] "the meta-data store"; par. [0236]
The attributes of each class ... is stored in this table"; pg. 9, "Flags") in order to provide
a system "flexible enough to allow individual business users to add custom data to
business objects which are EJB compliant" (Mehra par. [0012]).

10.   **Regarding Claims 2, 17, and 32:** The rejections of claims 1, 16, and 31 are
incorporated, respectively; further Lindholm discloses assigning the tool to an object is
performed based on a table (pg. 92, 4.4 Constant Pool) wherein the tool is associated
with one or more identifiers (pg. 148, 5.3 Interface Method Resolution "A constant pool
entry tagged as CONSTANT_InterfaceMethodref (§4.4.2) represents a call to an
instance method declared by an interface.").

11.   **Regarding Claims 3, 18, and 33:** The rejections of claims 1, 16, and 31 are
incorporated, respectively; further Lindholm discloses assigning the tool to an object is
performed based on a table (pg. 92, 4.4 Constant Pool) wherein the tool is associated
with one or more identifiers (g. 148, 5.3 Interface Method Resolution "A constant pool
entry tagged as CONSTANT_InterfaceMethodref (§4.4.2) represents a call to an
instance method declared by an interface.") and wherein the tool is assigned to objects
of only one class (see pg. 30, 2.13 Interfaces "A class may be declared to directly
implement one ... interfaces").

12.   **Regarding Claims 4, 19, and 34:** The rejections of claims 1, 16, and 31 are

incorporated, respectively; further Lindholm discloses the identifier is unique within its

class (pg. 258, invokeinterface "The method table of the class of the type of objectref is

determined."). Note that objectref is a pointer to a memory location (pg. 9, 2.4.5

Reference Types, Objects, and Reference Values "An object is a dynamically created

class instance ... The reference values ... are pointers to these objects") and thus is

unique within the system and inherently anticipates a unique reference within the class.

13.   **Regarding Claim 5-8, 20-23, 35-38:** The rejections of claim 1-4, 16-19, 31-34

are incorporated, respectively; further Lindholm discloses the at least one function

comprises a reference to an executable code (pg. 84, ClassFile "ClassFile { ...

method_info methods[methods_count];").

14.   **Regarding Claims 9-12, 24-27, and 39-42:** The rejections of claims 1-4, 16-19,

and 31-34 are incorporated, respectively; further Lindholm discloses the at least one

function comprises a reference to a first data array that stores information relating to the

technical attribute for the at least one function and a reference to a second data array

that stores information relating to the business attribute for the at least one function (pg.

9, "Flags varchar(15)"; par. [0236] The attributes of each class ... is stored in this

table").

15.   **Regarding Claims 13-15, 28-30, and 43-45:** The rejections of claims 1-3, 16-18,

and 31-33 are incorporated, respectively; further Lindholm discloses the tool comprises

a reference to a data array that stores information relating to an attribute for at least two

functions of the tool (pg. 9, "Flags varchar(15)"; Note that the 'Flags' array is associated

with a class id (Cid) and thus is available, and "related" to all methods of the class and

thus would be recognized as teaching a the claimed "relating to ... at least two

functions").

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jason Mitchell whose telephone number is (571) 272-

3728. The examiner can normally be reached on Monday-Thursday and alternate

Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/

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6/29/07

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